

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-7 (cancelled).

Claim 8 (new). A method for reducing the crest factor of a data symbol to be transmitted in a multi-carrier data transmission system, the data symbol being a function of a plurality of signals provided within a predetermined data frame, each of the plurality of signals allocated to a carrier, each carrier occupying at least one frequency from a transmit data spectrum, at least one carrier being reserved which is not provided for the data transmission, the method comprising:

receiving the predetermined data frame, the predetermined data frame exhibiting the data symbol and a cyclic prefix which is derived from a part of the data symbol; and
performing crest factor reduction corresponding to the predetermined data frame based at least in part on peak values within the cyclic prefix of the predetermined data frame.

Claim 9 (new). The method as claimed in claim 8, wherein the step of performing crest factor reduction further comprises performing crest factor reduction based at least in part on peak values within the data symbol of the predetermined data frame.

Claim 10 (new). The method as claimed in claim 8, further comprising:

- (a) filtering the data symbol and the cyclic prefix;
- (b) determining whether a time-domain function of the data symbol and of the cyclic prefix within the predetermined data frame exhibits at least one peak value that exceeds a first threshold;
- (c) determining an amplitude of an exhibited peak value and an associated position within the predetermined data frame;
- (d) generating a correction function by scaling and transposing a sample correction function in dependence on the amplitude and associated position of the exhibited peak value; and
- (e) modifying the data symbol to be transmitted by superimposing the correction function.

Claim 11 (new). The method as claimed in claim 10, further comprising repeating steps (b) - (e) until the data symbol no longer exhibits any peak values above the first threshold and/or a predetermined number of iteration steps has been reached.

Claim 12 (new). The method as claimed in claim 10, further comprising repeating steps (a) - (e) are repeated until the data symbol no longer exhibits any peak values above the first threshold and/or a predetermined number of iteration steps has been reached, the data symbol modified by the correction function being used for the filtering in step (a).

Claim 13 (new). The method as claimed in claim 10, further comprising oversampling at least the data symbol prior to step (b).

Claim 14 (new). The method as claimed in claim 10, wherein step (d) further comprises using a dirac-like function as the sample correction function.

Claim 15 (new). The method as claimed in claim 10, wherein step (d) further comprises using the at least one carrier which is not available for data transmission for generating the sample correction function in the time domain.

Claim 16 (new). A method for reducing the crest factor of a data symbol to be transmitted in a multi-carrier data transmission system, the data symbol being a function of a plurality of signals provided within a predetermined data frame, each of the plurality of signals allocated to a carrier, each carrier occupying at least one frequency from a transmit data spectrum, the method comprising:

(a) receiving the predetermined data frame, the predetermined data frame having the data symbol and a prefix which is derived from a part of the data symbol; and

(b) performing crest factor reduction corresponding to the predetermined data frame based at least in part on peak values within the cyclic prefix of the predetermined data frame.

Claim 17 (new). The method as claimed in claim 16, wherein the step (b) further comprises searching for peak values exceeding a first threshold in the data symbol and in

the cyclic prefix.

Claim 18 (new). The method as claimed in claim 17, wherein in step (b) further comprises filtering the data symbol and the cyclic prefix over the predetermined data frame prior to searching for peak values.

Claim 19 (new). The method as claimed in claim 18, wherein filtering the data symbol and cyclic prefix further comprises using filtering characteristics corresponding to a downstream filter of the multi-carrier data transmission system.

Claim 20 (new). The method as claimed in claim 18, wherein step (b) further comprises determining an amplitude of an identified peak value and an associated position within the predetermined data frame; and generating a correction function by scaling and transposing a sample correction function in dependence on the amplitude and associated position of the identified peak value.

Claim 21 (new). The method as claimed in claim 20, wherein step (b) further comprises modifying the data symbol to be transmitted by superimposing the correction function.

Claim 22 (new). The method as claimed in claim 17, wherein step (b) further comprises oversampling at least the data symbol prior to searching for peak values.

Claim 23 (new). The method as claimed in claim 20, wherein step (d) further comprises

using a dirac-like function as the sample correction function.

Claim 24 (new). The method as claimed in claim 20, wherein step (b) further comprises using the at least one carrier which is not available for data transmission for generating the sample correction function in the time domain.

Claim 25 (new). The method as claimed in claim 20, wherein step (b) further comprises oversampling at least the data symbol prior to searching for peak values.

Claim 26 (new). The method as claimed in claim 25, wherein step (d) further comprises using a dirac-like function as the sample correction function.

Claim 27 (new). The method as claimed in claim 25, wherein step (b) further comprises using the at least one carrier which is not available for data transmission for generating the sample correction function in the time domain.